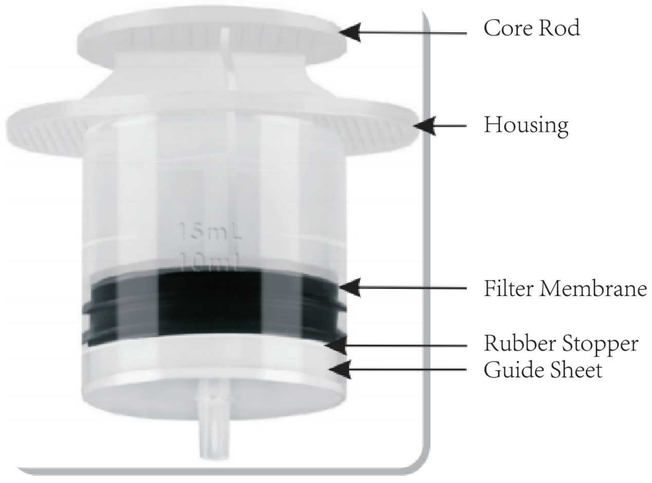
Structure



References

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[2] Chinese Medical Association Diabetes Society, Chinese Medical Association Infectious Diseases Society, Chinese Medical Association Tissue Repair and Regeneration Society. Chinese Guidelines for the Prevention and Treatment of Diabetic Foot (2019 Edition) (I) [J]. Chinese Journal of Diabetes, 2019, 11(2): 92-108.

[3] Chinese Geriatrics Society Burn and Trauma Branch. National Expert Consensus on the Application of Platelet Concentrate Products in Wound Healing (2020 Edition) [J]. Chinese Journal of Burns, 2020, 36(11): 993-1002.

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ORIGOBIO

DECELL MATRIX

Disposable Gel Patch Preparation Device

Bridging the gap in PRP wound repair application

The first product of the second category of domestic medical devices

The second category innovative medical device of Zhejiang Province

01 **User-friendly clinical application: seamless sinus tract filling and direct wound suture.**

02 **Stable sustained-release function: reducing the frequency of procedures and enhancing clinical efficacy.**



Background Introduction

With the acceleration of industrialization and aging, acute and chronic wounds have become a significant factor in threatening human health[1]. Statistics show that there are approximately 50 million patients with acute and chronic wounds in China, among whom 30 million suffer from diabetic foot ulcers[2]. Platelet-rich plasma (PRP) has become a major and effective means for wound treatment[3]. However, most PRP kits currently available in China do not include indications for direct wound application. Moreover, PRP gel not only lacks a sustained-release function but also has a high water content and is highly fluid, making it difficult to achieve uniform and effective wound coverage. Therefore, there is an urgent need for a PRP-derived product suitable for wound repair.

Indication

The product is used by doctors in medical institutions to process platelet-rich plasma and thrombin into gel patches, which are then immediately applied to the affected areas of the patients.

Compared with PRP

PRP Gel

1) The gel contains a lot of moisture and is highly fluid, making it difficult to achieve effective fixation on the wound surface;
2) The structure is loose, and active ingredients are prone to loss;
3) The material degrades too quickly, requiring repeated blood draws for treatment.



High water content



Rapid degradation

Gel Patch

The gel patch shows a 3-5x increase in tensile strength, providing better handling and fixation.



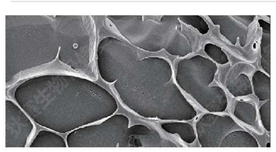
Wound suture



Sinus tract packing

The gel patch has strong mechanical properties, which can enable wound suturing and sinus tract packing.

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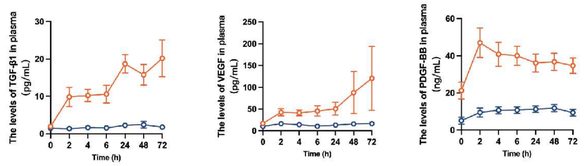
Before extrusion



After extrusion

The gel patch (right) has a significantly smaller pore size than before extrusion (left). The dense structure can effectively lock in platelets and prevent the loss of active ingredients in PRP due to the erosion of wound exudate.

Effectively enhance the sustained-release concentration and duration of platelet-derived growth factors, thereby improving the wound repair capability.



The concentration of growth factors released by the gel patch in the eluate gradually increases, significantly higher than that of PRP gel, and can maintain an effective concentration for 1 to 2 weeks.

Prolongs and strengthens the release of platelet growth factors for improved wound healing.



The PRP gel (control group) and PRP gel patch (experimental group) were applied to chronic wound surfaces, and continuous observation was conducted for 4 weeks. The results showed that the PRP gel patch significantly promoted wound repair compared to the PRP gel, with a significant difference between the two.

Clinical case

Case One

55 years old Female
Poor healing after surgery



The patch was sutured to the affected area to ensurea tight fit with the damaged tissue.

Case Two

61 years old Male
Type 2 diabetic foot (Wagner Grade 3)



After debridement, the exposed tissue was covered and sutured.

Case Three

75 years old Male
Lower limb ulcer



The patch was combined with a dressing to cover the non-sutured wound.